



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,003	01/18/2002	Patrick C. Marks	9319	7774

7590

08/13/2002

William W. Habelt  
Carrier Corporation  
P.O. Box 4800  
Syracuse, NY 13221

EXAMINER

NGUYEN, TU MINH

ART UNIT

PAPER NUMBER

3748

3

DATE MAILED: 08/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**Application No.  
**10/051,003**Applicant(s)  
**Marks et al.**Examiner  
**Tu M. Nguyen**Art Unit  
**3748**

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Jan 18, 2002 is/are a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 2      6) ☐ Other:

Art Unit: 3748

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Bloomer (U.S. Patent 6,422,192).

Re claim 1, in a system having a multi-speed engine (22) with an air inlet line (20) connected to the engine, Bloomer discloses a Helmholtz resonator structure comprising:

- a closed chamber (30, 31) defining a Helmholtz resonator continuously operatively

connected to the inlet line via a restricted connection (28 or 32); and

- means (flap valve (38) and necks (28) and (32)) for changing the frequency response of the Helmholtz resonator responsive to changes in speed of the engine.

Art Unit: 3748

Re claim 5, Bloomer discloses a system having a multi-speed engine (22) with an inlet line (20) connected to the engine, microprocessor means (53) for controlling the speed of the engine, the improvement comprising:

- a closed chamber (30, 31) defining a Helmholtz resonator continuously operatively connected to the inlet line via a restricted connection (28 or 32); and
- means (flap valve (38) and necks (28) and (32)) for changing the frequency response of the Helmholtz resonator responsive to changes in speed of the engine.

With regard to the preamble directed to “a refrigeration system”, a preamble to a claim is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self contained description of the structure not depending for completeness upon the introductory clause. See *Kropa v. Robie*, *supra* at 480. See also *Ex parte Mott*, 190 USPQ 311, 313 (PTO Bd. of App. 1975). Clearly, the pending claim 5 does not rely on the preamble for completeness.

Re claims 2 and 6, in the Helmholtz resonator of Bloomer, the means for changing the frequency response includes means (38, 52) for effectively changing the volume of the closed chamber connected to the inlet line.

Re claims 3 and 7, in the Helmholtz resonator of Bloomer, the means for changing the frequency response includes at least one restricted connection (28 or 32) which is selectively connected between the chamber and the inlet line.

Art Unit: 3748

Re claims 4 and 8, in the Helmholtz resonator of Bloomer, the means for changing the frequency response further includes means for effectively changing the volume of the closed chamber connected to the inlet line via the restricted connections (as shown in Figure 2, by closing neck (32) with flap valve (38), the volume of the closed chamber is the sum of volume (30) and volume (31); with both necks are open as depicted in Figure 3, however, the volume of the closed chamber is either volume (30) or volume (31)).

3. Claims 1, 3, 5, and 7 are further rejected under 35 U.S.C. 102(b) as being anticipated by Takeda (U.S. Patent 4,538,556).

Re claim 1, in a system having a multi-speed engine (100) with an air inlet line (2) connected to the engine, Takeda discloses a Helmholtz resonator structure comprising:

- a closed chamber (4) defining a Helmholtz resonator continuously operatively connected to the inlet line via a restricted connection (5 or 6); and
- means (necks (5) and (6) and valve (7)) for changing the frequency response of the Helmholtz resonator responsive to changes in speed of the engine.

Re claim 5, Takeda discloses a system having a multi-speed engine (100) with an inlet line (2) connected to the engine, microprocessor means (13) for controlling the speed of the engine, the improvement comprising:

- a closed chamber (4) defining a Helmholtz resonator continuously operatively connected to the inlet line via a restricted connection (5 or 6); and

Art Unit: 3748

- means (necks (5) and (6) and valve (7)) for changing the frequency response of the Helmholtz resonator responsive to changes in speed of the engine.

With regard to the preamble directed to “a refrigeration system”, a preamble to a claim is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self contained description of the structure not depending for completeness upon the introductory clause. See *Kropa v. Robie*, *supra* at 480. See also *Ex parte Mott*, 190 USPQ 311, 313 (PTO Bd. of App. 1975). Clearly, the pending claim 5 does not rely on the preamble for completeness.

Re claims 3 and 7, in the Helmholtz resonator of Takeda, the means (5, 6, 7) for changing the frequency response includes at least one restricted connection (5 or 6) which is selectively connected between the chamber and the inlet line.

***Prior Art***

4. The IDS (PTO-1449) filed on January 18, 2002 has been considered. An initialized copy is attached hereto.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of three patents: Brackett et al. (U.S. Patent 5,377,629), Fuesser et al. (U.S. Patent 6,105,546), and Matsumoto et al. (U.S. Patent 6,267,092), each discloses at least a Helmholtz resonator and a means to change the frequency response of the resonator in response to changes in engine speed.

Art Unit: 3748

*Communication*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tu Nguyen whose telephone number is (703) 308-2833.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas E. Denion, can be reached on (703) 308-2623. The fax phone number for this group is (703) 308-7763.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1148.

*Tu M. Nguyen*

TMN

Tu M. Nguyen

August 7, 2002

Patent Examiner

Art Unit 3748

*Thomas Denion*

THOMAS DENION  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700